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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT J. DAVIES and SAUL R. DOOLEY

Appeal 2008-3403
Application 09/876,515
Technology Center 2600

Decided: November 10, 2008

Before JAMESON LEE, RICHARD TORCZON and SALLY C. MEDLEY, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION ON APPEAL

A. Statement of the Case

Koninklijke Philips Electronics N.V. ("Philips"), the real party in interest, seeks review under 35 U.S.C. § 134(a) of a Final Rejection of claims 1-14. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

Philips' invention is related to a communication system that includes a beacon device and a portable device, such as a wireless telephone. The beacon device broadcasts a series of inquiry messages each in the form of a plurality of data fields according to a first communications protocol. The beacon device adds location information in an additional data field to each inquiry message before transmission. The portable device receives the transmitted inquiry messages that include the location information. Spec. Abs., 3.

Representative claim 1, reproduced from the Claim Appendix of the Appeal Brief, reads as follows:

> A communications system comprising at least one beacon device capable of wireless message transmission and at least one portable device capable of receiving such a message transmission, wherein the beacon is arranged to broadcast a series of inquiry messages each in the form of a plurality of predetermined data fields arranged according to a first communications protocol, wherein the beacon is further arranged to add to each inquiry message prior to transmission an additional data field, and wherein the at least one portable device is arranged to receive the transmitted inquiry messages and read data from said additional data field, the additional data field including location information.

Claims App., App. Br. 12.

The Examiner relies on the following prior art in rejecting the claims on appeal:

Whiteside	5,835,861	Nov. 10, 1998
King et al. ("King")	6,169,498	Jan. 2, 2001

The Examiner rejected claims 1-14 under 35 U.S.C. § 103(a) as unpatentable over Whiteside and King.

B. Findings of Fact ("FF")

1. "Inquiry" is defined as a seeking for truth, information, or knowledge. THE RANDOM HOUSE COLLEGE DICTIONARY (Rev. Ed. 1975).
2. Whiteside describes a billboard 20 with an infrared transceiver 22 that continuously broadcasts a vendor's telephone number for receipt by a wireless telephone 10. Col. 2, ll. 9-16.
3. The broadcast carries the vendor's telephone number in data message 16. Col. 2, ll. 16-18
4. We take official notice that when placing a telephone call within the United States, a user enters the area code first as a first data field and enters the remainder of the number in one or more additional data fields.
5. We take official notice that the first data field of a U.S. telephone number is often distinguished from the additional data fields by use of parenthesis, a space or a hyphen.
6. We take official notice that when placing an international call, a user enters the country code in a first data field and enters the remainder of the number in one or more additional data fields.
7. We take official notice that area codes and country codes indicate a specific geographical location or region.
8. Whiteside describes that message 16 (broadcast from billboard 20) can also be used to convey other data such as a bank interest rate or current product cost. Col. 2, ll. 35-36.
9. Message 15 (transmitted from wireless telephone 10) can also be enhanced to make a more specific request for one of the items of information that can be supplied by the billboard. Col. 2, ll. 36-39.

10. Billboard 20 and wireless telephone 10 communicate via modulated infrared (IR) signals. Col. 1, ll. 36-40, 48-49.
11. The wireless telephone includes an IR receiver 14. Col. 1, ll. 59-64.
12. Billboard 20 and wireless telephone 10 can alternatively communicate via radio frequency links. Col. 2, l. 65-col. 3, l. 1.
13. When using radio frequency links, the IR transmitter 13 and IR receiver 14 are replaced in the wireless telephone by its existing RF circuitry and antenna. Col. 3, ll. 1-14.
14. Phillips does not challenge the Examiner's finding that Bluetooth is old and well known wireless technology that enables devices such as portable computers, cell phones, and portable handheld devices to connect to each other and the Internet. Final Rejection 3-4; Ans. 4; Br. 8, 10.

C. Principles of Law

"In the patentability context, claims are to be given their broadest reasonable interpretations" *In re Van Geuns,* 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citations omitted). "Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition." *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

"A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742 (2007).

> A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference

> will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.

In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007).

In *KSR*, the Supreme Court explained that despite the enactment of Section 103 and the *Graham* analysis there still remains "the need for caution in granting a patent based on the combination of elements found in the prior art." *Id.* at 1739. Based on its precedent, the Court reaffirmed the principle that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.*

The Court's opinion in *United States v. Adams*, 383 U.S. 39, 40 (1966) is illustrative of the application of this principle in the case where the claimed invention is a prior art structure altered by substituting one element in the structure for another known element. *Id.* at 1739-40. "The Court [in *Adams*] recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *Id.* at 1740 (citation omitted) (The Court ultimately found unexpected results resulting from prior art warnings to be dispositive of nonobviousness).

D. Analysis

Claims 1, 8, 10 and 11

Representative claim 1 recites "the beacon is arranged to broadcast a series of inquiry messages . . .". Br. 12. Consistent with the dictionary definition of the term inquiry (FF[1] 1), we broadly construe an "inquiry message" as a message seeking information or knowledge. Philips does not direct us to an express disclaimer of a broader definition for an inquiry message.

Philips argues that Whiteside does not describe a beacon arranged to broadcast a series of inquiry messages. Br. 5. Philips argues that instead Whiteside describes continuously broadcasting a vendor's telephone number or sending a message from a billboard in response to a message sent from a wireless telephone. Br. 5.

Whiteside describes a billboard 20 with an infrared transceiver 22 that *continuously* broadcasts a vendor's telephone number. FF 2. The broadcast carries the vendor's telephone number in data message 16. FF 3. The data message 16 that includes the vendor's telephone number is an inquiry message because the message is implicitly seeking information (e.g., a response) from any potential message recipients to call the phone number provided. Whiteside's vendor telephone number is continuously broadcasted. FF 2. Thus, the continuous broadcast of the vendor's telephone number is a series of inquiry messages. For these reasons, we find that Whiteside describes a beacon that broadcasts a series of inquiry messages.

[1] FF denotes Finding of Fact.

Claim 1 also recites "a series of inquiry messages each in the form of a plurality of predetermined data fields arranged according to a first communications protocol . . .". Br. 12.

Philips argues that Whiteside does not describe the inquiry messages being in the form of a plurality of predetermined data fields arranged according to a predetermined protocol. Br. 5. Philips also argues that Whiteside does not teach or suggest what types of structures and/or protocols are used to transmit information. Br. 5

As explained before, Whiteside describes continuously broadcasting a vendor's telephone number. FF 2. It is well known that telephone numbers are divided into predetermined data fields. For example, when placing a telephone call within the United States, a user enters the area code first as a first data field and enters the remainder of the number in one or more additional data fields. FF 4. In this case, the first data field is often distinguished from the additional data fields by use of parenthesis, a space or a hyphen. FF 5. Likewise, for placing an international call, the user enters the country code in a first data field and enters the remainder of the number in one or more additional data fields. FF 6. It would have been obvious to one of ordinary skill that each instance of Whiteside's broadcasted telephone number (i.e., each inquiry message) is in the form of a plurality of predetermined data fields arranged according to a first communications protocol, e.g., country code or area code in a first data field followed by the remainder of the telephone number in one or more additional data fields.

Claim 1 further recites that "the beacon is further arranged to add to each inquiry message prior to transmission an additional data field . . . the additional data field including location information . . . ." Br. 12.

Philips argues that Whiteside is silent about adding an additional data field prior to transmission. Br. 6. Philips also argues that Whiteside and King do not teach that the additional data field is location information. Br. 6.

Whiteside describes continuously broadcasting a vendor's telephone number. FF 2. It is well known that telephone numbers are divided into predetermined data fields which include a data field for an area code or country code. FFs 4-6. The particular area code and/or country code of the telephone number indicates a specific geographical location or region. FF 7. Thus, Whiteside's continuously broadcasted vendor telephone number also includes location information in the area code and/or country code.

Alternatively, Whiteside further describes that message 16 can also be used to convey other data such as a bank interest rate or current product cost. FF 8. Whiteside describes sending a vendor's telephone number and also sending bank interest rates or product cost to a message recipient, which suggests that the message recipient may find further vendor information useful such as the vendor's address. Since each message 16 already includes the vendor's telephone number, it would have been obvious to one with ordinary skill to add the vendor's location information, e.g., vendor's address, to the message since this information may be useful to the message recipient. It would have also been obvious to one of ordinary skill to add an additional data field containing the vendor's location information to the inquiry message prior to transmission for the purpose of keeping the vendor's telephone number and location information in the same message. Adding an additional data field with the vendor location to the inquiry message containing the vendor telephone number ensures that message

recipients understand that the telephone number and location information correspond to the same vendor. Using an additional data field for the vendor's location information requires no more than ordinary skill in the art since the prior art already shows using a plurality of data fields for the telephone number.

For all these reasons we find that Philips has not sustained its burden of showing that the Examiner erred in rejecting claims 1, 8, 10 and 11 as unpatentable over Whiteside and King.

Claims 2 and 12

Claims 2 and 12 are dependent on claim 1 and 11 respectively. Br. 12, 14. Representative claim 2 recites "the beacon is arranged to add said additional data field at the end of a respective inquiry message." Br. 12.

Philips argues that Whiteside does not describe the aforementioned claim limitations. Br. 7.

Whiteside does not explicitly describe that an additional data field can be added at the end of the inquiry message. However, one with ordinary skill in the art would have recognized that the additional data field (i.e., vendor's location) could be added at the end of the message (i.e., vendor's telephone number) or could be added to the message at any other desirable position in the message, such as the beginning. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742 (2007).

For this reason we find that Philips has not sustained its burden of showing that the Examiner erred in rejecting claims 2 and 12 as unpatentable over Whiteside and King.

Claims 3 and 13

Claims 3 and 13 are dependent on claim 1 and 11 respectively. Br. 12, 14. Representative claim 3 recites "the beacon is arranged to include an indication in one of said predetermined data fields, said indication denoting the presence of said additional data field." Br. 12.

The Examiner and Philips disagree as to whether Whiteside describes the aforementioned claim limitations. Final Rejection 3; Ans. 4, citing Whiteside col. 2, ll. 35-39; Br. 7. Philips also argues that the citation to Whiteside provided by the Examiner is irrelevant. Br. 7.

The Whiteside citation provided by the Examiner describes that message 16 can also be used to convey other data such as a bank interest rate or current product cost and message 15 can also be enhanced to make a more specific request for one of the items of information that can be supplied by the billboard. FFs 8-9. The Examiner does not direct us to, and we can not find, where Whiteside or King describe including an indicator in one of the predetermined data fields that denotes the presence of the additional data field. Moreover, we do not find that one with ordinary skill would know to include an indicator in Whiteside's broadcasted inquiry message (i.e., vendor's telephone number) that denotes the presence of the additional data field (i.e., vendor's location).

For all these reasons, we find that the Examiner erred in rejecting claims 3 and 13 as unpatentable over Whiteside and King.

Claims 4, 9 and 14

Representative claim 9 is dependent on claim 8 and further recites "wherein the receiver is configured to receive messages according to Bluetooth protocols." Br. 13.

The Examiner finds that Bluetooth is old and well known wireless technology that enables devices such as portable computers, cell phones, and portable handheld devices to connect to each other and the Internet and Phillips does not contest this finding. FF 14.

Philips argues that Whiteside teaches away from a Bluetooth protocol because Whiteside teaches communications via an infrared signal instead of Bluetooth communication via short range radio frequency signals. Br. 8, 10.

Philips arguments are unpersuasive. Philips does not explain why a person of ordinary skill, upon reading the Whiteside reference, would be discouraged from following the path set out in the reference, or led in a direction divergent from the path that was taken by the inventors. Philips also does not dispute the Examiner's findings with respect to Bluetooth messaging being old and well known in the art. Moreover, contrary to Phillips' argument, Whiteside describes alternatively using radio frequency (RF) signals and RF receivers for communications. FFs 10-13. It would have been obvious to one with ordinary skill in the art at the time the invention was made to substitute a Bluetooth protocol and Bluetooth receiver for Whiteside's RF signals and RF receiver. The Supreme Court reaffirmed the principle that "when a [application] claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). Philips does not present evidence that substituting Bluetooth protocol and associated Bluetooth receiver for Whiteside's RF communication signals and associated RF receiver yields an unpredictable result.

For all these reasons we find that Philips has not sustained its burden of showing that the Examiner erred in rejecting claims 4 and 14 as unpatentable over Whiteside and King.

Claims 5 and 7

Claims 5 and 7 are dependent on claims 4 and 1, respectively. Claim 5 recites "a special Dedicated Inquiry Access Code (DIAC) is used to indicate the presence of location information in the additional data field." Br. 12. Claim 7 recites the "wireless messaging system employs frequency hopping, and . . . location data is sent on each frequency used for inquiry message broadcasts." Br. 13.

Philips argues that Whiteside does not describe the aforementioned limitations of claims 5 and 7. Br. 8-9. Philips also argues that the Whiteside citation provided by the Examiner to support the rejection is irrelevant. Br. 8-9.

We are not persuaded by Philips arguments. Contrary to Philips arguments, the Examiner does not provide a citation to Whiteside to support the rejection. In fact, the Examiner acknowledges that Whiteside does not describe a Dedicated Inquiry Access Code (DIAC) and frequency hopping. Final Rejection 4, Ans. 4. In addition, Philips does not dispute the Examiner's findings that (1) DIAC is old and well known according to the Bluetooth specification; (2) a unit adapted to communicate according to the Bluetooth specification receives an inquiry message including a general inquiry access code (GIAC) or an appropriate DIAC and may respond by sending an inquiry response message; and (3) the inquiry response message is a frequency hop synchronization message. Final Rejection 4, Ans. 4. Philips also does not dispute the Examiner's determination that it would

have been obvious to one with ordinary skill in the art at the time the invention was made to include the DIAC to indicate the presence of location information in the additional data field. Final Rejection 4, Ans. 4.

For all these reasons we find that Philips has not sustained its burden of showing that the Examiner erred in rejecting claims 5 and 7 as unpatentable over Whiteside and King.

Claim 6

Claim 6 is dependent on claim 1 and recites "wherein the presence of location information in the additional data field is indicated with header information appearing in the additional data field."

Philips argues that Whiteside and King do not teach or suggest the disputed claim limitations. Br. 9-10. Philips also argues that the Examiner's citation to King is irrelevant. Br. 9-10.

As explained before, Whiteside describes that message 16 can also convey bank interest rate or current product cost (FF 8) which suggests that the message recipient may find additional vendor information useful such as the vendor's address. Since each message 16 already includes the vendor's telephone number, it would have been obvious to one with ordinary skill to add the vendor's location information, e.g. vendor's address, to the message since this information may be useful to the message recipient. It would further would have been obvious to one of ordinary skill to include header information, e.g., "Location", "Interest Rate", "Product Cost", in the additional data field to ensure that the message recipient will understand the context of the data contained in the additional data field.

For all these reasons, we find that Philips has not sustained its burden of showing that the Examiner erred in rejecting claim 6 as unpatentable over Whiteside and King.

E. Decision

Upon consideration of the appeal, and for the reasons given herein:

the decision of the Examiner rejecting claims 1-2, 4-12 and 14 under 35 U.S.C. § 103(a) as unpatentable over Whiteside and King is affirmed; and

the decision of the Examiner rejecting claims 3 and 13 under 35 U.S.C. § 103(a) as unpatentable over Whiteside and King is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED IN-PART

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